ABSTRACT

***In vitro* cultures of medicinal plants – XI.**

Elicitation is one of the few strategies that can be used in enhancement of secondary metabolites production from explant cultures. The effect of abiotic elicitor (silver nitrate) on flavonolignan and flavonoid taxifolin production in suspension culture of *Silybum marianum* L. (Gaertn.) and on isoflavones production in suspension culture of *Genista tinctoria* L. was tested. Silver nitrate in various concentrations ($5.887.10^{-3}$ mol/l; $5.887.10^{-4}$ mol/l; $5.887.10^{-5}$ mol/l) was used as elicitor. Content of secondary metabolites in suspension cultures was determinated by high performance liquid chromatography (HPLC). The samples were taken after 6, 12, 24, 48, 72 and 168 hours after elicitor treatment. The highest content of taxifolin production (0.02 %) in suspension culture of *Silybum marianum* L. (Gaertn.) after silver nitrate ($5.887.10^{-4}$ mol/l) treatment and 72 h sampling was detected. The highest content of genistin (0.05 %) in suspension culture of *Genista tinctoria* L. was found after silver nitrate ($5.887.10^{-4}$ mol/l) treatment and 48 h sampling. The highest content of daidzein (0.09 %) was detected after elicitor ($5.887.10^{-4}$ mol/l) treatment and 168 h sampling.